Top Secret

[redacted]

25X1

NATIONAL PHOTOGRAPHIC
INTERPRETATION CENTER

BASIC
IMAGERY
INTERPRETATION
REPORT

HYDERABAD MISSILE RESEARCH AND DEVELOPMENT FACILITY DRDL (S)

25X1

STRATEGIC WEAPONS INDUSTRIAL FACILITIES
INDIA
AUGUST 1979

Top Secret

25X1

RCA-09/0020/79

Copy 45 25X1

25X1

INSTALLATION OR ACTIVITY NAME					COUNTRY
Hyderabad Missile Research and Development Facility DRDL					IN
UTM COORDINATES	GEOGRAPHIC COORDINATES	CATEGORY	BE NO.	COMIREX NO.	NIETB NO.
NA	17-19-30N 078-30-00E				

25X1

MAP REFERENCE

DMA. JOG, Series 1501, Sheet NE 44-9, scale 1:250,000

LATEST IMAGERY USED	NEGATION DATE (If required)
	NA

25X1

ABSTRACT

1. (S/WNINTEL) The Hyderabad Missile Research and Development Facility Defense Research and Development Laboratory is the principal military facility in India involved in liquid engine and solid-propellant motor research and development.

2. (S/WNINTEL) During the 1970s, research has been conducted on the SA-2, SA-3, and STYX missiles at this facility.

3. (S/WNINTEL) Since October 1974, major additions have been completed in the administration, engineering, and fabrication area; a propellant research and development area has been constructed; and some additions and completions have been made in the rocket motor test and support area.

4. (S) This report updates a previous NPIC report, [redacted] This report includes a location map, five annotated photographs, and mensural data.

25X1

INTRODUCTION

5. (S/WNINTEL) The Hyderabad Missile Research and Development (R&D) Facility Defense Research and Development Laboratory (DRDL) is at Chandrayangutta, a suburb of Hyderabad, India, approximately 4.0 nautical miles (nm) south-southeast of the center of Hyderabad (Figure 1). DRDL is served by a road with the closest rail line in Hyderabad. The closest major airfield is Hyderabad Airfield [redacted], 7.8 nm to the north. The facility is secured completely by a combination of wall and fence. Construction has begun on an inner fence which will double-fence secure the facility when complete.

25X1

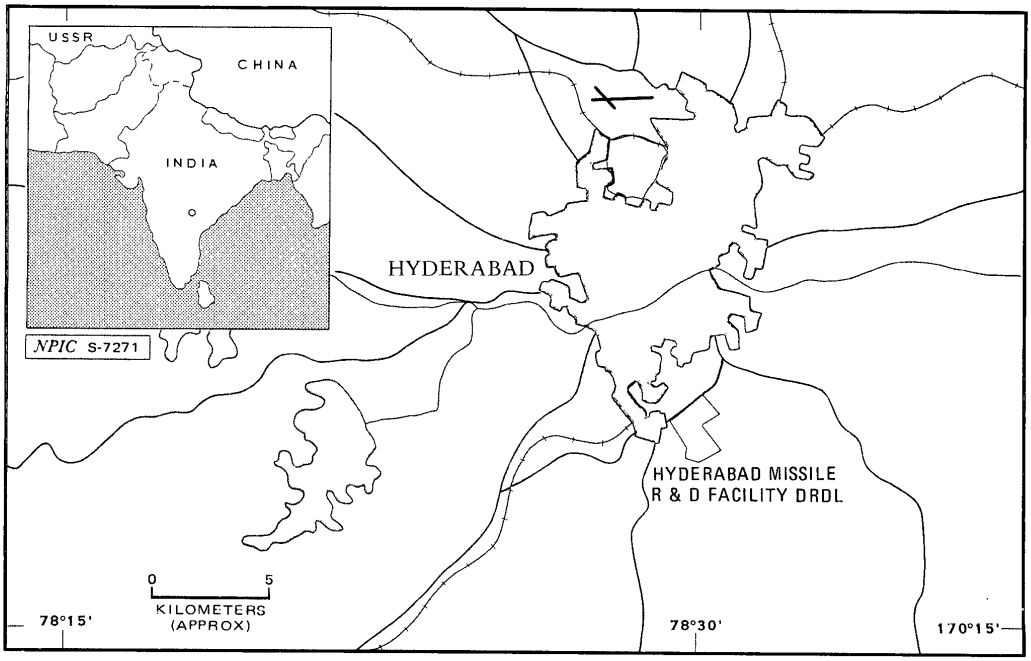


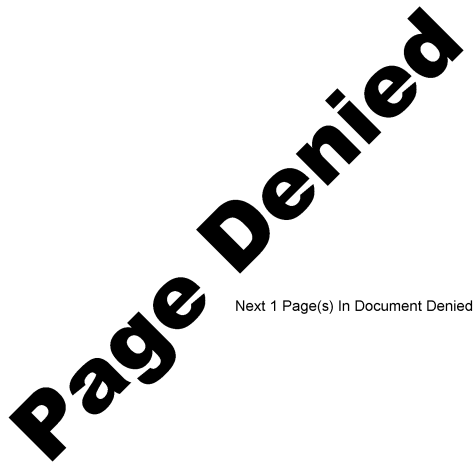
FIGURE 1. LOCATION OF HYDERABAD MISSILE R&D FACILITY DRDL, INDIA

25X1

Table 1.
Hyderabad Missile R&D Facility DRDL
(Keyed to Figure 2)

This table in its entirety is classified TOP SECRET RUFF

Item	Description	Dimensions* (m) L	W	H	First Seen Ucon	Complete	Remarks
Propellant R&D Area							
1	Processing bldg				Mar 77	Jan 78	
2	Processing bldg				Mar 77	Apr 78	Ramp entrance to bldg
3	Control bldg				Mar 79	Feb 78	
4	Prob grinding/blending bldg				Oct 77	Jun 78	
5	Prob stor bldg				Mar 77	Apr 78	2 ramp entrances to bldg
6	Support bldg				Sep 77	Jun 78	
7	Support bldg				Feb 78	May 78	
8	Prob ingredient preparation bldg				Oct 77	Apr 78	
9	Processing bldg				Apr 77	Jan 78	
10	Processing bldg				Apr 77	Apr 78	
11	Prob ingredient stor bldg				Mar 77	Apr 78	
12	Prob propellant mixing bldg				Mar 77	Apr 78	Revetted
13	Control bldg				Mar 77	Jan 78	
14	Poss drying bldg				Mar 77	Apr 78	Revetted
15	Processing bldg				Mar 77	May 78	
16	Processing bldg				Mar 77	May 78	
17	Poss extrusion bldg				Oct 77	Apr 78	
18	Processing bldg				Apr 77	Apr 78	Revetted
19	Support bldg				Apr 77	Jan 78	
20	Prob casting & curing bldg				Sep 77	Apr 78	Revetted
21	Control bldg				Sep 77	Apr 78	
22	Processing bldg				Apr 77	Apr 78	Revetted
23	Solid rocket motor stor bldg				Sep 77	Apr 78	Revetted
24	Solid rocket motor stor bldg				Sep 77	Apr 78	Revetted
25	Engineering/lab test bldg				Mar 76	Mar 77	
26	Engineering/lab test bldg				Mar 76	Mar 77	Blast wall near southern entrance
27	Engineering/lab test bldg				May 73	Mar 74	
28	Engineering/lab test bldg				Mar 76	Mar 77	
29	Engineering/lab test bldg				May 73	Mar 74	
Rocket Motor Test and Support Area							
30	Horizontal rocket engine test position				May 73	Oct 73	
31	Cold-flow calibration test stand				Oct 73	Apr 75	
32	Vertical liquid-engine test stand				Oct 73	Apr 75	Measurements do not include flame bucket
33	Control bldg				Mar 74	Apr 75	
34	Stor/support bldg				May 73	Oct 73	
35	Stor/support bldg				May 73	Oct 73	
36	Stor/support bldg				Apr 75	Nov 75	
37	Liquid-propellant lab				Aug 70	May 73	Southern portion of bldg contains a 2-bay test position
38	Horizontal rocket engine test position				—	Oct 65	Inactive since at least May 73; complete when first observed
39	Horizontal rocket engine test position				—	Oct 65	Inactive since at least May 73; complete when first observed
40	Horizontal rocket engine test position				—	Oct 65	Inactive since at least May 73; complete when first observed
41	Prob admin bldg				Mar 74	Apr 75	
42	Test control bldg				—	Oct 65	Complete when first observed
43	Oxidizer stor shed				—	Mar 74	Complete when first observed
44	Support bldg				Aug 70	Nov 71	
45	Support bldg				Aug 70	Nov 71	
46	Stor bldg				Aug 70	Mar 74	Revetted
47	Oxidizer stor shed				—	Mar 74	Complete when first observed
48	Engineering/lab test bldg				—	Feb 67	Complete when first observed
49	Engineering/lab test bldg				—	Feb 67	Complete when first observed
50	Support bldg				Apr 77	Sep 77	
51	Support bldg						
a					Mar 74	Oct 74	
b					May 73	Oct 73	
52	Support bldg				Aug 70	Oct 73	
53	Poss temperature conditioning bldg				—	Oct 73	First section of bldg completed in Feb 67
54	Engineering/lab test bldg				Nov 66	Feb 67	
55	Stor/support bldg				Sep 71	Mar 74	Within a blast wall
56	Support bldg				May 78	Oct 78	
57	Missile engineering/-lab bldg				Apr 75	Nov 75	SA-2, SA-3, & STYX missile shipping containers stored outside bldg
58	Prob igniter stor bldg				Oct 73	Mar 74	
59	Prob igniter stor bldg				Oct 73	Mar 74	
60	Lab bldg				Sep 72	May 73	
a							
b							
61	Prob igniter production bldg				Apr 71	Dec 72	
62	Vehicle shed				Apr 78	Sep 78	
Administration, Engineering and Fabrication Area							
63	Hypersonic wind tunnel				Oct 75	—	Extended portion still ucon as of Apr 79
64	Poss air pressure plant				—	Mar 77	Bldg complete when first observed
65	Fab/assem bldg				Oct 75	Mar 77	SA-2/-75-type missile handling dolly observed at southern end of bldg
66	Fab bldg				Oct 75	Mar 77	
67	Fab/assem bldg				Oct 75	Mar 77	
68	Fab/assem bldg				Oct 75	Mar 76	
69	Fab/assem bldg				Oct 75	Mar 76	
70	Fab/shop bldg				Oct 75	Mar 76	SA-2/-75 missile shipping containers observed at southern end of bldg
71	Fab/assem bldg				Apr 71	Sep 72	
72	Warehouse				Oct 75	Mar 76	
73	Warehouse				Oct 75	Mar 77	
74	Warehouse				Oct 75	Mar 77	
75	Shop bldg				Sep 71	Dec 72	
76	Fab/assem bldg				Nov 71	May 73	
77	Lab bldg				Sep 71	Sep 72	
78	Vehicle shed						
a	Prior to Oct 74				—	—	
b	New addition				Oct 74	Apr 75	
79	Lab bldg				Oct 73	Oct 74	
80	Lab bldg				Aug 70	Dec 72	
81	Lab bldg				Aug 70	Sep 72	
82	Shop bldg				Oct 73	Mar 74	
83	Shop bldg				Aug 70	Sep 72	
84	Shop bldg				Mar 72	Sep 72	
85	Admin bldg				Aug 70	Sep 72	
86	Stor bldg				Oct 75	Mar 76	
87	Substation				Mar 77	Sep 77	
88	Stor/support bldg				—	Mar 77	Bldg complete when first observed
89	Stor/support bldg				May 78	Sep 78	
90	Firehouse				Sep 72	May 73	
91	Admin/engineering bldg				May 73	Oct 74	
a							
b							
c							
d							
92	Security bldg				Apr 71	Nov 71	



Next 1 Page(s) In Document Denied

6. (S/WNINTEL) DRDL is the principal military facility in India involved in liquid-engine and solid-propellant motor research and development. India has at least three other motor test facilities—Sri Harikota Island Rocket Motor Test Facility (, Thumba Missile and Rocket Test Site , and Poona Explosives Loading Facility (25X1 25X1

BASIC DESCRIPTION

7. (TSR) DRDL consists of a propellant research and development area; a rocket motor test and support area; an administration, engineering, and fabrication area; and a housing area (Figure 2 and Table 1). This report updates a previous NPIC report.[1]

Propellant Research and Development Area

8. (TSR) This area was not yet operational when observed in April 1979, but all structures were externally complete. The area contains a double-base propellant production line, a composite propellant production line (Figure 3), and several engineering/laboratory test buildings.

9. (TSR) The significant buildings identified within this area include a probable grinding/-blending building, a probable propellant mixing building, a probable ingredient preparation building, a possible extrusion building, and a probable casting and curing building. All of the buildings in the propellant production lines have been constructed since March 1977.

Rocket Motor Test and Support Area

10. (TSR) Since October 1974, this area has had only two major changes. The vertical liquid-engine test stand (Figure 4) was observed complete by April 1975, and a missile engineering/laboratory building (Figure 5) was constructed by November 1975.

Administration, Engineering, and Fabrication Area

11. (TSR) Significant additions to this area since October 1974 include a hypersonic wind tunnel (Figure 6), which is still under construction, six fabrication or fabrication/assembly buildings, and three warehouses.

Housing Area

12. (TSR) Since October 1974, only three additional housing units have been constructed.

Imagery Analyst's Comments

13. (TSR) DRDL could manufacture prototype rockets and missiles and will probably move in that direction in the early 1980s. SA-2/-75 missiles are possibly being assembled here for testing at Sri Harikota Island Rocket Launch Station (. Launch activity involving the SA-2/-75 missile system is described in a recent NPIC report on Sri Harikota Complex, 25X1 25X1

14. (TSR) Important indications of activity first observed during the 1970s included a rocket motor test burn scar at a now inactive, horizontal rocket engine test position, which was identified in early 1971. The first SA-2-related observation occurred in December 1972 when several canisters were seen. A STYX missile shipping container was first identified in October 1973, and the first SA-3 canister was observed in March 1977.

15. (TSR) The vertical liquid-engine test stand at this facility is significant in that it provides the military with the largest liquid-engine test capability identified in India (Figure 4). An actual test has not been observed, but water was identified in the flame bucket as early as November 1975. The water level has repeatedly fluctuated since then, making it almost impossible to determine if a test has occurred to date.

16. (S/WNINTEL) The Chandrayangutta suburb of Hyderabad is a major military R&D area. Significant facilities within 2 nm of DRDL include the Hyderabad Electronics Research Laboratory Hyderabad Ordnance Research and Development Facility DMRL Hyderabad MIDHANI Superalloy Plant , and Hyderabad Possible Bharat Dynamics Limited . All of these facilities are involved in rocket-/missile-related projects for the military with the exception of MIDHANI, which is still under construction. When complete, MIDHANI will reportedly also serve in this capacity.[3] 25X1 25X1 25X1

25X1

25X1

REFERENCES

IMAGERY

(TSR) All applicable KEYHOLE imagery acquired from [redacted] was used in the preparation of this report. 25X1 25X1

MAPS OR CHARTS

DMA, Joint Operations Graphic, Series 1501, Sheet NE 44-9, scale 1:250,000 (Distribution Limited/UNCLASSIFIED)

DOCUMENTS

1. NPIC. [redacted], RCA-09/0061/75, *Hyderabad Solid Motor Test Facility,* Apr 75 (TOP SECRET [redacted] 25X1 25X1
2. NPIC. [redacted] RCA-15/0002/79, *Sri Harikota Complex (S),* Jun 79 (TOP SECRET [redacted] 25X1 25X1
3. DOD. IIR 6 844 0037 78, *Indian Superalloys Project has Implications for Missile Development,* 16 Feb 78 (UNCLASSIFIED)

REQUIREMENT

COMIREX J02
Project 290010DJ

(S) Comments and queries regarding this report are welcome. They may be directed to [redacted] Regional Analysis Division, Imagery Exploitation Group, NPIC, [redacted] 25X1 25X1

[redacted]